

## **For Immediate Release**

New Brunswick/Glassboro, NJ

### **New Jersey maintains rapid rate of urban development and subsequent loss of open space**

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New Jersey is still among the most rapidly urbanizing states in the nation. That trend is continuing according to researchers at the Rutgers University Center for Remote Sensing and Spatial Analysis and Rowan University Department of Geography. The research team consisting Dr. Richard Lathrop and John Bognar (Rutgers) and Dr. John Hasse (Rowan) are evaluating newly-released data to assess urban development and loss of open space in New Jersey occurring during recent decades. The research, funded by the Geraldine R. Dodge Foundations, utilizes a detailed digital map of land use in NJ created from high resolution aerial photographs taken in 2002 (please example below). The digital map, developed by the New Jersey Department of Environmental Protection, took 5 years to compile and is the third such map, providing an update to similar maps created for the years 1986 and 1995. The study compares land use changes and trends over these three dates.

Preliminary findings of this on-going study reveal that urban development increased statewide by 105,988 acres during the 1995 – 2002 time period. A corresponding amount of open space was lost consisting of farmland, forest and wetlands. The data also show that some regions of the state increased the rate of development faster than others and that in some areas there has been an especially significant increase in the rate of upland forest conversion.

The completed report, expected to be released at the end of spring 2007, will detail urban development trends and loss of open space throughout the state. Preliminary findings being released today highlight the major trends occurring statewide revealed in the analysis.

#### **Preliminary Findings:**

1) **Urban Development Rate:** The addition of 105,988 acres of urban development to New Jersey's landscape brings the state's total urbanized area to 1,440,464 acres as of 2002. This represents approximately 29% of the states total land area developed. The net annualized rate of urban development statewide during 1995 to 2002 was 15,140 acres per year. This represents a slight increase in the rate of development from the 1986 to 1995 period rate of 14,886 acres per year.

2) **Loss of Open Space:** The increase in urban development came at the expense of a corresponding loss of open space. The majority of open space loss was experienced by farmland (55,530 net acres lost), although the annualized rate of loss (7,933 acres per year) represented a slowdown from the annualized farmland loss during the 1986 to 1995 time period (9,485 acres per year).

The net amount of upland forest loss from 1995 to 2002 was 41,463 acres. This represents an annualized rate of 5,923 acres per year, an increase in the rate of forest loss of 38% when compared with the 4,300 acres of annualized loss experienced during the previous time period.

Wetlands lost a total of 12,747 acres statewide between 1995 and 2002, increasing its annualized loss to 1,821 acres per year, a 4% increase over the 1,755 acres lost per year during 1986-1995.

**Summary Table** state-wide land use patterns

Land Use Type	1995 Total Acres	2002 Total Acres	Net Change 1995-2002	Annualized Net Change 1995-2002	Annualized Net Change 1986-1995	% Change in Annualized Rates
Urban	1,334,476	1,440,464	105,988	15,141	14,886	+2%
Agriculture	652,334	596,804	-55,530	-7,932	-9,485	-16%
Forest	1,616,683	1,575,220	-41,463	-5,923	-4,300	+38%
Water	800,610	800,572	-38	-5	NA	NA
Wetlands	1,022,291	1,009,544	-12,747	-1,821	-1,755	+4%
Bare Land	57,562	61,352	3,789	541	NA	NA

3) **Regional analysis:** The geographic distribution of urban growth has remained consistent throughout the state with most counties experiencing 1995 to 2002 development rates on-par with their 1986 to 1995 rates. Counties standing out as growth hotspots with significant up ticks in development rates include coastal counties (Atlantic, Monmouth and Ocean with +24%, +22%, +37% increase in annual rate, respectively) and Central Jersey counties (Middlesex and Somerset with +18% and +19% increase in annual rate, respectively). Several counties including Salem, Cumberland and Hunterdon saw their development rates decrease with annualized development rates dropping -24%, -23% and -19% respectively. From a watershed perspective, Watershed Management Area(WMA) 12 (Raritan Bay-Navesink-Shrewsbury-Shark River) and WMA 13 (Barnegat Bay) represent hot spots of growth with increases in annual rate of over +28% and +39% respectively from the previous time period.

4) **Hotspots for forest loss, farmland loss, and wetlands loss.** While the majority of open space loss occurred on farmland, the study shows a significant increase in the conversion of forest land since the previous period. The major hotspots of upland forest loss (> 500 acres/year) include the coastal counties of Atlantic, Monmouth and Ocean, where the annual rates (acres/year) of forest loss have all significantly increased (+58%, +82%, and +59% respectively) and Morris county (north central Jersey) which lost approximately 741 acres/year (though this is a slower rate than the 1986 to 1995 time period).

Major hotspots of agricultural land loss (> 500 acres/year) are Burlington, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Somerset, Sussex and Warren counties. While most counties have shown a decline in the annual rate of farmland loss, Monmouth County experienced an increase from 898 acres/year to 1038 acres/year (an increase of approximately 15%).

Wetlands loss followed a largely similar pattern to the areas of rapid development, with coastal and central counties experiencing the greatest loss. Cumberland, Monmouth and Middlesex counties top the list with each losing over 200 acres of wetlands per year.

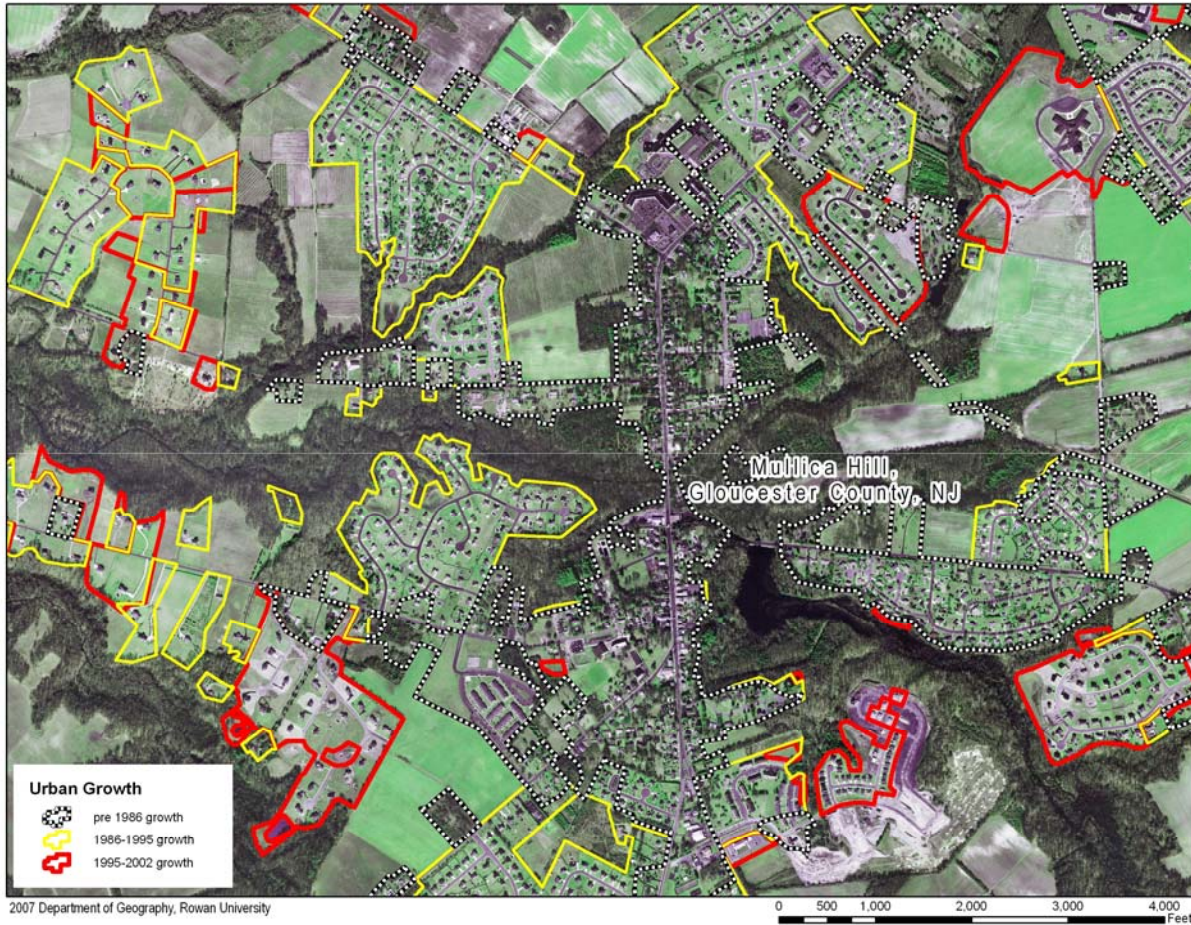
5) **Consequences of this change.** As the most densely populated state in the nation, New Jersey has long struggled with balancing new development to house a growing population with maintaining environmental quality. The preliminary results of this study confirm that development pressure has continued at a remarkably robust rate through 2002. The study also confirms that issues pertaining to the loss of farmland, forest and wetlands continue to be pressing. The increase in the rate of forest loss is especially critical due to all the attendant ecosystem services that forests provide such as watershed protection, carbon sequestration, wildlife habitat, and recreation, to name just a few.

The final report is expected to be completed at the end of spring. For further information and continuing updates visit: <http://crssa.rutgers.edu/projects/lc/>

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Example of land use mapping comparing changes between 1986, 1995 and 2002 for Mullica Hill, Gloucester County, New Jersey.